METHOD FOR PERFORMING INTEGER DIVIDES WITHOUT PROPAGATION OF TRUNCATION ERROR

Abstract of the Disclosure

A method and structure for performing a sequence of integer divides without propagation of truncation error. During encoding and decoding of video signals, a buffer is dynamically filled with binary bits of encoded video data at a variable rate, and the data is subsequently removed from the buffer at a constant rate. Calculating the number of bits removed from the buffer as each video frame is processed requires integer divides with consequent truncation of the quotient. An accumulator is utilized for each integer divide to cumulatively store remainders generated by successive integer divides. If the accumulator accumulates to a value (A) that is no less than the divisor (D) of the associated integer divide, then the quotient is effectively increased by 1, and A is decremented by D, which compensates for the prior truncations and avoids a buffer overflow violation that may otherwise occur.